CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 93-013
NPDES PERMIT NO. CA0038580

WASTE DISCHARGE REQUIREMENTS FOR:

HERCULES WASTEWATER TREATMENT PLANT
CITY OF HERCULES
CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

1. The City of Hercules, hereinafter called the Discharger, submitted a Report of Waste Discharge dated January 14, 1993 for reissuance of waste discharge requirements and a permit to discharge wastewater to waters of the State and the United States under the National Pollutant Discharge Elimination System (NPDES).

2. The Discharger owns and operates the City of Hercules wastewater treatment plant, located approximately 2,500 feet west of the intersection of San Pablo Avenue and Highway 4 in Hercules, Contra Costa County.

3. The facility has capacity to provide secondary level treatment for approximately 0.373 million gallons per day (MGD) of domestic, commercial, and industrial wastewater from a portion of the Hercules area. The remainder of the City's wastewater is treated at another treatment plant located in Pinole which is jointly owned by the Cities of Pinole and Hercules.

4. The treatment facility consists of coarse screening at the influent pump station, primary and secondary treatment in series in three facultative ponds, dual media filtration, and chlorination followed by dechlorination. Sludge is removed from the ponds as needed. The treated effluent is discharged into San Pablo Bay, a water of the State and United States, through a common outfall about 3,600 feet offshore at a depth of 18 feet below mean lower low water (38 deg 03 min 06 sec N latitude and 122 deg 15 min 55 sec W longitude), which is used jointly by Rodeo Sanitary District and the Cities of Pinole and Hercules.

5. The discharge is presently governed by Regional Board Order No. 88-003, which allows discharge into San Pablo Bay.

6. The State Water Resources Control Board (State Board) adopted the California Enclosed Bays and Estuaries Plan on April 11, 1991. These Plans identify water quality objectives for all enclosed bays and estuaries, and inland surface waters in the state, and a strategy for implementation of the objectives. These plans require the water quality objectives to be implemented in Discharger's Waste Discharge Requirement permits.

7. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin on December 17, 1986, and the State Board approved the revised Water Quality Control Plan on May 21, 1987. The Board adopted revisions to the 1986 Water Quality Control Plan on December 11, 1991. The State Board remanded the amended Basin Plan based on procedural concerns and the Regional Board readopted the amended Basin Plan (hereinafter referred to as the Basin Plan) on September 16, 1992. State Board approval of this revised plan is pending. The Basin Plan identifies beneficial uses and water quality objectives for surface waters in the region, as well as effluent limitations and discharge prohibitions intended to protect beneficial uses.

8. This Order implements the plans, policies and provisions of the Board's Basin Plan, and the State Board's California Enclosed Bays and Estuaries Plan.

9. The Basin Plan contains water quality objectives and beneficial uses for San Pablo Bay. The beneficial uses of San Pablo Bay are as follows:

   a. Industrial Service Supply
   b. Navigation
   c. Water Contact Recreation
   d. Non-contact Water Recreation
   e. Ocean Commercial and Sport Fishing
   f. Wildlife Habitat
   g. Preservation of Rare and Endangered Species
   h. Fish Migration
   i. Fish Spawning
   j. Shellfish Harvesting
   k. Estuarine Habitat

10. The Discharger is planning to build a new wastewater treatment plant to replace the existing facility, and construction of the new plant is anticipated to begin sometime during 1995. When construction of the new treatment plant begins, flows which are currently treated at the existing facility will be directed to the Pinole wastewater treatment plant. The Discharger intends to propose an increase in the capacity of the treatment plant, and flows to the common outfall. The Board shall consider approval of any flow and/or pollutant loading increase to San Pablo Bay upon proposal by the Discharger through amendment or reissuance of this Order.

11. The revised Basin Plan contains new effluent limitations for selected toxic pollutants such as heavy metals, and priority pollutant organics. The Basin Plan allows for inclusion of an effluent limitation higher than that specified in Table IV-1B when the increase in concentration is caused by implementation of significant water reclamation or water reuse program at the facility, the increase in the effluent limitation does not result in an increase in the mass loading, and water quality objectives will not be exceeded outside the zone of initial dilution.

12. The revised Basin Plan allows for distinction between effluent limitations that are met by current performance, and effluent limitations not currently attained. This Order requires immediate compliance for effluent

limits that are met by current performance. Compliance with effluent limitations not currently attained is required by March, 1994. A longer compliance time schedule will be permitted if the Discharger participates in an aggressive source control program. Implementation of source control measures to reduce pollutant loadings to the maximum extent practicable shall be completed as soon as possible, but no later than April 11, 1996.

13. A review of the Discharger's monitoring data indicated that the Discharger will be able to comply with the daily average Basin plan effluent limitations for arsenic, cadmium, chromium, lead, mercury, nickel, cyanide, silver, phenols, and PAH's. The Discharger's ability to comply with the copper, selenium, the monthly average for mercury, and the remaining organic constituent limits cannot be predicted due to detection limit problems or insufficient data.

14. The revised Basin Plan includes new acute toxicity requirements for effluent that are more stringent than previously specified. The Discharger is currently unable to meet the new acute toxicity requirements. This Order establishes a time schedule for compliance with the new limits, in order to allow time for the Discharger to evaluate the causes of toxicity in their effluent, and achieve compliance.

15. The Discharger's sewage collection system includes four pump stations. These pump stations, along with the entire sewage collection system, require ongoing maintenance, and upgrades as necessary to accommodate sewage flows.

16. Federal Regulations for stormwater discharges were promulgated by the United States Environmental Protection Agency on November 16, 1990. The regulations [40 Code of Federal Regulations, Parts 122, 123, and 124] require specific categories of industrial activities which discharge storm water associated with industrial activity (industrial storm water) to obtain an NPDES permit and to implement Best Technology Economically Available (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial storm water discharges.

17. The storm water flows from the wastewater treatment facility process areas are directed to the wastewater treatment plant headworks and are treated along with the wastewater discharged to the treatment plant. These storm water flows constitute all industrial storm water at this facility and consequently this permit regulates all industrial storm water discharge at this facility.

18. An Operation and Maintenance Manual is maintained by the Discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, recommended operation strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, the manual shall be kept updated to reflect significant changes in treatment facility equipment and operation practices.

19. This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (California Environmental Quality Act) pursuant to Section 13389 of the California Water Code.

20. The Discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided an opportunity to submit their written views and recommendations.

21. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the City of Hercules (Discharger) shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. Discharge at any point at which the wastewater does not receive an initial dilution of at least 45:1 is prohibited.

2. The bypass or overflow of untreated or partially treated wastewater to waters of the State, either at the treatment plant or from the collection system or pump stations tributary to the treatment plant is prohibited.

3. The average dry weather flow discharge shall not exceed 0.373 MGD. The average dry weather flow shall be determined over three consecutive dry weather months each year.

4. Discharges of water, materials, or wastes other than storm water, which are not otherwise authorized by this NPDES permit, to a storm drain system or waters of the state are prohibited.

B. SPECIFICATIONS

1. Wastewater at the surface of all ponds shall meet the following quality limits at all times: In any grab sample:

Dissolved oxygen	2.0 mg/l minimum
Dissolved sulfides	0.1 mg/l maximum

2. A minimum freeboard of one foot shall be maintained in all ponds at all times.

3. All ponds shall be protected from erosion, washout, and flooding from the maximum flood having a predicted frequency of once in 100 years.

4. The waste shall not cause degradation of any ground water so as to impair beneficial uses.

C. EFFLUENT LIMITATIONS

1. The effluent discharged to the common outfall shall not exceed the following limits:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Biochemical Oxygen Demand (BOD_5, 20°C)	mg/l	30	45	60	--
b. Total Suspended Solids	mg/l	30	45	60	--
c. Oil and Grease	mg/l	10	--	20	--
d. Settleable Matter	ml/l-hr	0.1	--	--	0.2
e. Total Chlorine Residual (1)	mg/l	--	--	--	0.0

Footnote: (1) Requirement defined as below the limit of detection in standard test methods.

2. pH: The pH of the effluent shall not be less than 6.0, nor greater than 9.0.

3. Total Coliform Bacteria: The treated wastewater, at some place in the treatment process prior to discharge, shall meet the following limits of bacteriological quality: The moving median value for the Most Probable Number (MPN) of total coliform bacteria in any five (5) consecutive samples shall not exceed 240 MPN/100 ml; and, any single sample shall not exceed 10,000 MPN/100 ml.

4. Acute Toxicity: Representative samples of the effluent shall meet the following limits for acute toxicity during the specified time periods: [Provision F.4 of this Order applies to these bioassays.]

   From February 17, 1993 through July 1, 1994: The survival of test organisms in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50% survival based on the ten most recent consecutive samples.

   After July 1, 1994: The survival of organisms in undiluted effluent shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 percentile value of not less than 70 percent survival. The eleven sample median and 90th percentile effluent limitations are defined as follows:

   11 sample median: If five or more of the past ten samples are less than 90 percent survival, then survival of less than 90 percent of the next, eleventh sample represents a violation of the effluent limitation.

   90th percentile: If one or more of the past ten samples is less than 70 percent survival, then survival of less than 70 percent on the next, eleventh, sample represents a violation of the effluent limitation.

5. 85 Percent Removal, BOD and TSS: The arithmetic mean of the biochemical oxygen demand (five-day, 20°C) and total suspended solids values, by weight, for effluent samples collected in each calendar month shall not

exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period.

6. TOXIC SUBSTANCES EFFLUENT LIMITATIONS: TO BE IN EFFECT FROM FEBRUARY 17, 1993 THROUGH MARCH 1, 1994.

The effluent shall not exceed the following limits (f):
[Units for all limits are in ug/l]

TABLE 1

Constituent	Monthly Average	Daily Average (b)	Interim Limit Daily Average
1. Arsenic		200 (j)	
2. Cadmium		30 (j)	
3. Chromium (VI) (c)		110 (j)	
4. Copper			50 (i)
5. Lead (g)		53 (h)	
6. Mercury		1 (j)	
7. Nickel (g)		65 (h)	
8. Cyanide (e)		25 (h)	
9. Silver		23 (h)	
10. Zinc		580 (j)	
11. Phenols		500 (h)	
12. PAHs (d)		150 (h)	

7. TOXIC SUBSTANCES EFFLUENT LIMITATIONS: TO BE IN EFFECT MARCH 1, 1994

The effluent shall not exceed the following limits (a) (f):
[Units for all limits are in ug/l]

TABLE 2 - FINAL LIMITS

Constituent	Monthly Average (b)	Daily Average (b)
1. Arsenic		200 (j)
2. Cadmium		30 (j)
3. Chromium (VI) (c)		110 (j)
4. Copper		17
5. Lead (g)		53
6. Mercury	0.21	1.0 (j)
7. Nickel (g)		65
8. Selenium (g)		50
9. Silver		23
10. Zinc (g)		580 (j)
11. 1,2 Dichlorobenzene (d)	180,000	
12. 1,3 Dichlorobenzene	26,000	
13. 1,4 Dichlorobenzene	640	
14. 2,4,6 Trichlorophenol	10	
15. Aldrin	0.0014	
16. A-BHC		360
17. Benzene	210	

TABLE 2 FINAL LIMITS (continued)

Constituent	Monthly Average	Daily Average
18. B-BHC	0.46	
19. Chlordane (d)	0.00081	0.04
20. Chloroform	4,800	
21. Cyanide (e)		25
22. DDT (d)	0.006	0.01
23. Dichloromethane	16,000	
24. Dieldrin	0.0014	0.019
25. Endosulfan (d)		0.087
26. Endrin (d)		0.023
27. Fluoranthene	420	
28. G-BHC (Lindane)	0.62	1.6
29. Halomethanes (d)	4,800	
30. Heptachlor	0.0017	0.036
31. Heptachlor Epoxide	0.0007	
32. Hexachlorobenzene	0.0069	
33. PAHS (d)	0.31	150
34. PCBS (Total) (d)	0.0007	0.3
35. Pentachlorophenol (g)		79
36. Phenol	500	
37. TCDD Equivalents (d)	1.4E-07	
38. Toluene	3,000,000	
39. Toxaphene (g)	0.0069	0.002
40. Tributyltin	0.05	

Footnotes:

a. These limits are based on marine water quality objectives, and are intended to be achieved through secondary treatment and, as necessary, pretreatment and source control.
b. Limits apply to the average concentration of all samples collected during the averaging period (Daily = 24-hour period; Monthly = Calendar month).
c. The Discharger may meet this limit as total chromium.
d. See California Enclosed Bays and Estuaries Plan, April 1991, Definition of Terms.
e. The Discharger may demonstrate compliance with this limitation by measurement of weak acid dissociable cyanide.
f. All analyses shall be performed using current EPA Methods, as specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition. Detection limits, practical quantitation levels, and limits of quantitation will be taken into account in determining compliance with effluent limitations.
g. Effluent limitation may be met as a 4-day average. If compliance is to be determined based on a 4-day average, then concentrations of four 24-hour composite samples shall be reported, as well as the average of four.
h. These limitations are based on effluent limitations specified in the revised Basin Plan.
i. This is an interim limit based on the detection limit currently being achieved by the Discharger.
j. This limit was specified in Order No. 88-003 and is lower than the new limit specified in the revised Basin Plan. The Discharger has

maintained compliance with this lower limit; therefore, this limit will continue to apply to the effluent, and not be replaced with the new limit from the Basin Plan.

C. RECEIVING WATER LIMITATIONS

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;
   b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;
   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State at any place within one foot of the water surface:

   a. Dissolved Oxygen: 5.0 mg/l, minimum

      The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.

   b. Dissolved Sulfide 0.1 mg/l, maximum

   c. pH: Variation from normal ambient pH by more than 0.5 pH units.

   d. Un-ionized ammonia 0.025 mg/l as N, annual median
      0.16 mg/l as N, maximum

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

E. SLUDGE HANDLING AND DISPOSAL REQUIREMENTS

1. All sludge treatment, processing, storage or disposal activities under the Discharger's control shall be in compliance with current state and federal regulations.

2. The Board may amend this Order prior to the expiration date if necessary to accommodate changes in applicable state or federal sludge regulations, or changes in the Discharger's sludge management procedures.

3. The Discharger shall notify the Board, in writing, prior to any changes in its sludge handling and disposal practices.

4. Permanent sludge storage or disposal activities are not authorized by this permit. A Report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity by the Discharger.

5. Sludge handling, storage and disposal shall not create a condition of pollution or nuisance as defined in Section 13050 (l) and (m) of the California Water Code.

6. Sludge handling, storage, and disposal shall not cause waste to be discharged to, or deposited in, waters of the State.

7. Sludge handling, storage, and disposal shall not cause degradation of groundwaters.

8. Sludge storage facilities under the Discharger's control shall be operated and maintained in such a manner as to provide adequate protection from surface runoff, erosion, or other conditions which would cause drainage from the waste materials to escape from the storage facility site(s).

9. General Provisions A.9 and A.12 of this Board's "Standard Provisions and Reporting Requirements", dated December 1986, apply to sludge handling and disposal practices.

10. The term 'sludge' as used in this permit is defined in Definition E.18 of this Board's "Standard Provisions and Reporting Requirements", dated December 1986.

F. <u>PROVISIONS</u>

1. Requirements prescribed by this Order supercede the requirements prescribed by Order No. 87-150. Order No. 87-150 is hereby rescinded.

2. Where concentration limitations in mg/l or ug/l are contained in this Permit, the following Mass Emission Limitations shall also apply:

   (Mass Emission Limit in kg/day) = (Concentration Limit in mg/l) x (Actual Flow in million gallons per day averaged over the time interval to which the limit applies) x 3.78 (conversion factor).

3. The Discharger shall comply with all sections of this Order immediately upon adoption.

4. Bioassays: Compliance with Effluent Limitation B.4 of this Order shall be evaluated by measuring survival of test fishes exposed to undiluted effluent for 96 hours in static renewal bioassays, using representative samples of the discharged effluent. Each fish specie tested represents a

single bioassay. Two fish species shall be tested concurrently. These shall be the most sensitive two species determined from a single concurrent screening (all tests must be completed within ten days of initiating the first test) of the following three species: three-spine stickleback, rainbow trout and fathead minnow. All bioassays shall be performed according to protocols approved by the U.S. EPA or State Board, or published by the American Society for Testing and Materials (ASTM) or American Public Health Association.

5. The Discharger shall comply with Effluent Limitations B.6 immediately upon adoption of this Order. The Discharger shall comply with effluent limitations specified in Effluent Limitations B.7 by March 1, 1994. The Discharger may request an extended compliance time schedule for particular substances, based on the implementation of an aggressive source control and waste minimization program, as provided for in the Enclosed Bays and Estuaries Plan, Chapter III, Part M. The primary goal in setting compliance schedules is to promote the completion of source control and waste minimization measures.

6. The Discharger shall initiate a monitoring program using appropriate EPA methods and detection limits, to evaluate compliance status for all constituents listed in Effluent Limitations Tables 1 and 2. Monitoring for constituents in Tables 1 and 2 shall be performed annually. The first round of sampling and analyses shall be done during June, 1993.

7. The Discharger shall submit, by October 1, 1993, a technical report acceptable to the Executive Officer summarizing the results of the initial stage of monitoring for the constituents listed in Effluent Limitation B.7, and determining the limit of quantitation and/or practical quantification limit for each constituent. This report shall include an evaluation of compliance with the effluent limitations for each constituent. For each constituent, the LOQ/PQL should be less than the effluent limit.

   If the monitoring results document that the effluent cannot meet the limits to take effect on March 1, 1994, the Discharger may petition for interim limits. This petition shall be submitted no later than December 1, 1993, and must be based on the planning and implementation of an aggressive source control program. The source control program shall be initiated immediately following evaluation of the June, 1993 analytical results, and shall include, at a minimum, the following steps:

   (a) The Discharger shall complete a Source Identification Study for targeted constituents (those constituents detected at or above the effluent limitation);

   (b) The Discharger shall develop and initiate implementation of a Source Reduction Plan; and,

   (c) The Discharger shall complete implementation of the Source Reduction Plan to reduce pollutant loading to the maximum extent possible by April 1, 1996.

8. If the Discharger chooses to pursue a capacity increase for the treatment plant, information that must be submitted prior to Board consideration of a flow increase must include, but may not be limited to, the following:

   a. Engineering reports documenting adequate reliability, capacity and performance of the new treatment plant;
   b. Documentation that increased discharges (evaluation must include assessment of wet weather flows) will not result in degradation of receiving waters, or adverse impacts on beneficial uses of receiving waters, in accordance with State and Federal anti-degradation regulations and policies;
   c. Plans for complying with a mass loading requirement for copper pursuant to the proposed wasteload allocation amendments to the Basin Plan (1993); and,
   d. Documentation of compliance with the California Environmental Quality Control Act.

9. The Discharger shall submit, by November 1, 1993, a status report on the pump stations. This report shall provide an update on the presence of alarms and standby power for each pump station. If alarms and standby power are not available at each pump station, then a proposed time schedule shall be submitted for installation of such features.

10. The Board may modify, or revoke and reissue, this Order and Permit if present or future investigations demonstrate that the discharges governed by this Order are causing or significantly contributing to adverse impacts on water quality and/or beneficial uses of the receiving waters.

11. The Discharger shall review, and update as necessary, its Operations and Maintenance Manual, annually, or within 90 days of completion of any significant facility or process changes. The Discharger shall submit to the Board, by April 15th of each year, a letter describing the results of the review process including an estimated time schedule for completion of any revisions determined necessary, and a description or copy of any completed revisions.

12. Annually, the Discharger shall review and update as necessary, its contingency plan as required by Board Resolution No. 74-10. The Discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this order pursuant to Section 13387 of the California Water code. Plan revisions, or a letter stating that no changes are needed, shall be submitted to the Board by April 15 of each year.

13. The Discharger shall implement a program to regularly review and evaluate its wastewater collection, treatment and disposal facilities in order to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order to provide adequate and reliable transport, treatment and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities. A report discussing the status of this evaluation program, including any recommended or planned actions, shall be submitted to the Board by April 15 of each year.

14. The Discharger shall comply with the Self-Monitoring Program for this order, as adopted by the Board and as may be amended by the Executive Officer.

15. The Discharger shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December, 1986.

16. This order shall serve as a National Pollutant Discharge Elimination System (NPDES) Permit pursuant to section 402 of the Clean Water Act or amendments thereto, and shall become effective fifty days after the date of its adoption provided the Regional Administrator of the Environmental Protection Agency has no objections. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

17. This order expires on February 17, 1998. The Discharger must file a Report of Waste Discharge (Permit application) in accordance with Title 23, Chapter 3, Subchapter 9 of the California Code of Regulations not later than 180 days in advance of such expiration date, as application for issuance of new waste discharge requirements.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on February 17, 1993.

STEVEN R. RITCHIE
Executive Officer

Attachments:

A. Self-Monitoring Program
B. Standard Provisions and Reporting Requirements, December 1986
C. Resolution No. 74-10

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO MAY REGION

SELF-MONITORING PROGRAM
FOR

HERCULES WASTEWATER TREATMENT PLANT

HERCULES, CONTRA COSTA COUNTY, CALIFORNIA

NPDES PERMIT NO. CA0038580

ORDER NO. 93-013

CONSISTS OF

PART A, dated December 1986

AND

PART B

PART B

SELF-MONITORING PROGRAM for HERCULES WASTEWATER TREATMENT PLANT
NPDES Permit No. CA0038580

I. DESCRIPTION OF SAMPLING STATIONS

NOTE: A sketch showing the locations of the stations described below shall accompany each monthly report, and the Annual report for each calendar year.

A. INFLUENT

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and prior to any phase of treatment.

B. PONDS

Station	Description
P-1 through P-3	Within one foot of the surface of all three ponds.

C. EFFLUENT

Station	Description
E-001	At any point after disinfection at which all waste from the treatment plant is present but before it is combined with the effluent from the City of Pinole.

D. LAND OBSERVATIONS

Station	Description
L-1 through L-'n'	Located not more than 100 feet apart along the periphery of the waste treatment facilities. (A sketch showing the locations of these stations shall accompany each annual report).

E. OVERFLOWS AND BYPASSES

Station	Description
O-1 through O-'n'	Bypass or overflows from manholes, pump stations, or collection system.

NOTE: 1. A map and description of each known or observed overflow or bypass location shall accompany each monthly report.

Overflow reporting shall include a report on pump station alarms, pumping capacity, and upstream storage capacity. A summary of these occurrences and their locations shall be included with the Annual Report for each calendar year.

2. Each occurrence of a bypass or overflow shall be reported to the Regional Board in accordance with the reporting requirements specified in Sections G.1 and G.2 of Self-Monitoring Program Part A.

F. SLUDGE

The Discharger shall report to the Regional Board when sludge is removed from the ponds, and specify where the sludge is disposed of.

II. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be that given in Table I and Table 1 Footnotes.

III. MODIFICATION OF PART A, DATED DECEMBER 1986

Paragraph C.5 of Part A is revised to read:

Average monthly values are calculated as the sum of all daily discharge values measured during the specified period (calendar month), divided by the number of daily discharge values measured during that specified period.

IV. REPORTING REQUIREMENTS

A. General Reporting Requirements are described in Section C of this Board's "Standard Provisions and Reporting Requirements", dated December 1986.

B. Self-Monitoring Reports for each calendar month shall be submitted monthly, by the fifteenth day of the following month. The required contents of these reports are described in Section G.4 of Part A.

C. An Annual Report for each calendar year shall be submitted to the Board by January 30 of the following year. The required contents of the annual report are described in Section G.5 of Part A.

D. Any Overflow, bypass or significant non-compliance incident that may endanger health or the environment shall be reported according to Sections G.1 and G.2 of Part A.

E. Revisions to the Discharger's Contingency Plan, or a letter stating that no changes are needed, shall be submitted to the Board by April 15 of each year [Provision F.15].

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 93-013.

2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger, and revisions will be authorized by the Executive Officer.

3. Is effective on the date shown below.

STEVEN R. RITCHIE
Executive Officer

Effective Date 2/17/93

Attachment:

A. Table 1 with Table 1 Footnotes

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

SAMPLING STATION	A	E-001			All P		All L	All O (7)
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	O	G/O
Flow Rate (mgd) (1)	D			D				
BOD, 5-day, 20°C (mg/l & kg/day)	3/W		3/W					
Total Suspended Solids (mg/l & kg/day)	3/W		3/W					
Settleable Solids (ml/l-hr)		D						
Oil and Grease (2) (mg/l & kg/day)		W						
Chlorine Residual, and Dosage (mg/l & kg/day) (3)			2H or Cont					
Coliform, Total (MPN/100 ml)		5/W						
Toxicity, 96-hr Bioassay (% Survival) (4)			M					
Turbidity (NTU)								
pH (units)				cont				
Temperature °C					W			
Dissolved Oxygen (mg/l & % Saturation)					W			
Sulfides, Total & D'solved (if DO<2.0 mg/l) (mg/l)								
Ammonia Nitrogen (mg/l & kg/day)								
Nitrate Nitrogen (mg/l & kg/day)								
Nitrite Nitrogen (mg/l & kg/day)								

TABLE 1 (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

SAMPLING STATION	A	E-001			All P		All L	All O (7)
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	O	G/O
Total Organic Nitrogen (mg/l & kg/day)								
Un-ionized Ammonia (mg/l as N)								
Hardness (mg/l as $CaCO_3$)								
Freeboard (feet)					W			
All Applicable Standard Observations					W		W	E
Arsenic (5)			Y					
Cadmium (5)			Y					
Chromium (5)			Y					
Copper (5)			Y					
Lead (5)			Y					
Mercury (5)			Y					
Nickel (5)			Y					
Selenium (5)			Y					
Silver (5)			Y					
Zinc (5)			Y					
Cyanide (5)			Y					
Phenolic Compounds (5)			Y					
PAH's (5)			Y					
Toxic Constituents (Table 2) Section B.7 of Permit (5) (6)			Y					

LEGEND

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample (24 hour)
Cont = continuous sampling
O = observation

TYPES OF STATIONS

A = treatment facility influent station
E = waste effluent station
L = basin and/or pond levees stations
C = receiving water station
P = treatment facilities perimeter station
OV = bypasses or overflows from manholes, pump stations, or collection systems

LEGEND (continued)

FREQUENCY OF SAMPLING

E = each occurrence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = once in March & Sept.
3/Y = once each in March, July, & Nov.
Q = quarterly, once each in March, June, Sept., & Dec.

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
2M = every 2 months
Cont = continuous

FOOTNOTES FOR TABLE 1:

(1) Flow Rate - Influent and effluent flows shall be measured continuously. The following flow information shall be reported:

INFLUENT AND EFFLUENT: Daily: Flow Rate
Monthly: Average Daily Flow Rate (MGD)
Maximum Daily Flow Rate (MGD)
Minimum Daily Flow Rate (MGD)
Total Flow Volume (MG)

(2) Oil and Grease - Each Oil and Grease sample shall consist of three grab samples taken at equal intervals, no less than two hours apart, during the sampling day. Each Grab sample shall be collected in a separate glass container, and analyzed separately. Results shall be expressed as a weighted average of the three values, based upon the instantaneous flow rates occurring at the time of each grab sample.

(3) Chlorine Residual - Monitor dechlorinated effluent (E-001-S) continuously or, at a minimum, once every two hours. Report, on a daily basis, both maximum and minimum concentrations, for samples taken both prior to, and following, dechlorination. If a violation is detected, the maximum and average concentrations and duration of each non-zero residual event shall be reported, along with the cause and corrective actions taken.

Chlorine Dosage - Report, on a daily basis, average concentration (mg/l), and total loading (kg/day).

(4) Bioassays - Effluent used for fish bioassays must be dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia nitrogen, and temperature. These results shall be reported.

(5) Detection Limits - Laboratory analyses shall be conducted in such a manner as to provide analytical information sufficient to determine compliance with the applicable effluent limitations (Effluent Limitations B.7 of Permit). If the necessary analytical performance in unable to be achieved, the Discharger may request, with supporting documentation, approval from the Executive Officer to allow the use of the best achievable analytical performance. All constituents shall be reported in mg/l or ug/l, and kg/day.

(6) Selected Toxic Constituents - The initial monitoring for these constituents shall be as described in Provision F.6 of Order No. 93-013. The monitoring schedule thereafter shall be as follows: For those constituents that are present at concentrations at or above the effluent limit, monitoring shall be performed on a semi-annual basis, For those constituents that are detectable (or non-detectable) at levels below the effluent limit, monitoring shall be performed on an annual basis.

(7) Overflows -

(a) Flow: For all overflow events, a best estimate of the total overflow volume (gallons) shall be reported.

(b) BOD and Coliform: For any overflow event which involves discharge of wastewater to any surface water or waterway (including dry streams and drainage channels), grab samples shall be taken and analyzed for BOD, and both Total and Fecal Coliform.

NOTES FOR TABLE 1:

1. Percent removal for BOD and Total Suspended Solids (effluent vs. influent) shall also be reported.

2. Grab samples shall be taken on day(s) of composite sampling.

3. If any effluent sample is in violation of limits, except those for metals, cyanide, and organics, sampling shall be increased for that parameter to at least daily or greater until compliance is demonstrated in two successive samples. receiving water violations shall be reported in the monthly report; increased receiving water monitoring may be required.

4. Chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.

5. Receiving water monitoring in lower Peyton Slough shall be done during high tide.

6. All flow other than to the outfall (e.g., sludge) shall be reported monthly. Daily records shall be kept of the quantity and solids content of dewatered sludge disposed of and the location of disposal.

7. PAHs = Polynuclear Aromatic Hydrocarbons. PAH's shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene. PAH analysis must be done by EPA Method 610.

8. Ultra clean monitoring techniques are required for mercury and selenium. Analytical monitoring methods used must yield a limit of quantitation (LOQ) value that is less than the effluent limit concentration.

9. During any time when bypassing occurs from any treatment unit(s) in the treatment facilities, the monitoring program for the effluent discharged shall include the following in addition to the above schedule for sampling, measurement and analyses:

   a. Composite sample on an hourly basis for the duration of the bypass event for BOD, and Total Suspended Solids analyses. Grab samples at least daily for Coliform (Total and Fecal), Settleable Matter and Oil and Grease analyses.

   b. Continuous monitoring or hourly grab samples for chlorine residual measurement, and continuous monitoring of bypassed flow.

   c. Daily receiving water sampling and observations shall be performed until it is demonstrated that no adverse impact on the receiving water is detected.